

IN THE CLAIMS

1. - 11. (Cancelled)

12. (Original) An electron source manufacturing method characterized by comprising the steps of:

arranging on a support member a substrate having a conductor and a wiring line connected to the conductor;

covering the conductor on the substrate with a vessel except for part of the wiring line;

setting a desired atmosphere in the vessel; and

applying a voltage to the conductor via the part of the wiring line.

13. (Original) The electron source manufacturing method according to claim 12, wherein the step of setting the desired atmosphere in the vessel comprises the step of evacuating an interior of the vessel.

14. (Currently Amended) The electron source manufacturing method according to claim 12 ~~or 13~~, wherein the step of setting the desired atmosphere in the vessel comprises the step of introducing gas into the vessel.

15. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 12 to 14~~ claim 14, further comprising the step of fixing the substrate to the support member.

16. (Original) The electron source manufacturing method according to claim 15, wherein the step of fixing the substrate to the support member comprises the step of vacuum-chucking the substrate and the support member.

17. (Original) The electron source manufacturing method according to claim 15, wherein the step of fixing the substrate to the support member comprises the step of electrostatically chucking the substrate and the support member.

18. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 12 to 17~~ claim 12, wherein the step of arranging the substrate on the support member comprises arranging a heat conduction member between the substrate and the support member.

19. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 12 to 18~~ claim 12, wherein the step of applying the voltage to the conductor comprises the step of controlling a temperature of the substrate.

20. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 12 to 18~~ claim 12, wherein the step of applying the voltage to the conductor comprises the step of heating the substrate.

21. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 12 to 18~~ claim 12, wherein the step of applying the voltage to the conductor comprises the step of cooling the substrate.

22. (Original) An electron source manufacturing method characterized by comprising the steps of:

arranging on a support member a substrate on which a plurality of devices, each having a pair of electrodes and a conductive film arranged between the pair of electrodes, and wiring lines which connect the plurality of devices are formed;

covering the plurality of devices on the substrate with a vessel except for part of the wiring lines;

setting a desired atmosphere in the vessel; and

applying a voltage to the plurality of devices via the part of the wiring lines.

23. (Original) An electron source manufacturing method characterized by comprising the steps of:

arranging on a support member a substrate on which a plurality of devices, each having a pair of electrodes and a conductive film arranged between the pair of electrodes, and a plurality of X-direction wiring lines and a plurality of Y-direction wiring lines which connect the plurality of devices in a matrix are formed;

covering the plurality of devices on the substrate with a vessel except for part of the plurality of X-direction wiring lines and the plurality of Y-direction wiring lines;

setting a desired atmosphere in the vessel; and

applying a voltage to the plurality of devices via the part of the plurality of X-direction wiring lines and the plurality of Y-direction wiring lines.

24. (Currently Amended) The electron source manufacturing method according to claim 22~~or 23~~, wherein the step of setting the desired atmosphere in the vessel comprises the step of evacuating an interior of the vessel.

25. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 22 to 24~~ claim 22, wherein the step of setting the desired atmosphere in the vessel comprises the step of introducing gas into the vessel.

26. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 22 to 25~~ claim 22, further comprising the step of fixing the substrate to the support member.

27. (Original) The electron source manufacturing method according to claim 26, wherein the step of fixing the substrate to the support member comprises the step of vacuum-chucking the substrate and the support member.

28. (Original) The electron source manufacturing method according to claim 26, wherein the step of fixing the substrate to the support member comprises the step of electrostatically chucking the substrate and the support member.

29. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 22 to 28~~ claim 22, wherein the step of arranging the substrate on the support member comprises arranging a heat conduction member between the substrate and the support member.

30. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 22 to 29~~ claim 22, wherein the step of applying the voltage to the devices comprises the step of controlling a temperature of the substrate.

31. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 22 to 29~~ claim 22, wherein the step of applying the voltage to the devices comprises the step of heating the substrate.

32. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 22 to 29~~ claim 22, wherein the step of applying the voltage to the devices comprises the step of cooling the substrate.

33. (Original) An electron source manufacturing method characterized by comprising the steps of:

arranging on a support member a substrate on which a plurality of devices, each having a pair of electrodes and a conductive film arranged between the pair of electrodes, and wiring lines which connect the plurality of devices are formed;

covering the plurality of devices on the substrate with a vessel except for part of the wiring lines;

setting a first atmosphere in the vessel;

applying a voltage to the plurality of devices via the part of the wiring lines in the first atmosphere;

setting a second atmosphere in the vessel; and

applying a voltage to the plurality of devices via the part of the wiring lines in the second atmosphere.

34. (Original) An electron source manufacturing method characterized by comprising the steps of:

arranging on a support member a substrate on which a plurality of devices, each having a pair of electrodes and a conductive film arranged between the pair of electrodes, and a plurality of X-direction wiring lines and a plurality of Y-direction wiring lines which connect the plurality of devices in a matrix are formed;

covering the plurality of devices on the substrate with a vessel except for part of the plurality of X-direction wiring lines and the plurality of Y-direction wiring lines;

setting a first atmosphere in the vessel;

applying a voltage to the plurality of devices via the part of the plurality of X-direction wiring lines and the plurality of Y-direction wiring lines in the first atmosphere;

setting a second atmosphere in the vessel; and

applying a voltage to the plurality of devices via the part of the plurality of X-direction wiring lines and the plurality of Y-direction wiring lines in the second atmosphere.

35. (Currently Amended) The electron source manufacturing method according to claim 33 ~~or 34~~, wherein the step of setting the first atmosphere in the vessel comprises the step of evacuating an interior of the vessel.

36. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 33 to 35~~ claim 33, wherein the step of setting the second atmosphere in the vessel comprises the step of introducing gas containing a carbon compound into the vessel.

37. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 33 to 36~~ claim 33, further comprising the step of fixing the substrate to the support member.

38. (Original) The electron source manufacturing method according to claim 37, wherein the step of fixing the substrate to the support member comprises the step of vacuum-chucking the substrate and the support member.

39. (Original) The electron source manufacturing method according to claim 37, wherein the step of fixing the substrate to the support member comprises the step of electrostatically chucking the substrate and the support member.

40. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 33 to 39~~ claim 33, wherein the step of arranging the substrate on the support member comprises arranging a heat conduction member between the substrate and the support member.



41. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 33 to 40~~ claim 33, wherein the step of applying the voltage to the devices comprises the step of controlling a temperature of the substrate.

42. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 33 to 40~~ claim 33, wherein the step of applying the voltage to the devices comprises the step of heating the substrate.

43. (Currently Amended) The electron source manufacturing method according to ~~any one of claims 33 to 40~~ claim 33, wherein the step of applying the voltage to the devices comprises the step of cooling the substrate.